[56]

[24]	HANDLING BIOWASTE AND OTHER MATERIALS IN ISOLATION		
[75]	Inventor:	Carlos L. Krumdieck, Birmingham, Ala.	
[73]	Assignee:	University of Alabama in Birmingham, Birmingham, Ala.	
[21]	Appl. No.:	794,147	
[22]	Filed:	May 5, 1977	
[51]	Int. Cl.2	G01N 1/04; E03D 1/00	

[54] APPARATUS FOR HOMOGENIZING AND

[22]	Filed:	May 5, 1977
[51] [52]	Int. Cl. ² U.S. Cl	G01N 1/04; E03D 1/00 4/319; 4/347
-	Field of Se	73/421 B; 141/130; 141/329 arch

References Cited

	U.S. PAT	ENT DOCUMENTS	
4	5/1906	MacMillan	12

820,004 3,383,923 3,540,433 3,713,177 3,718,431	5/1906 5/1968 11/1970 1/1973 2/1973	MacMillan	
3,718,431 3,727,241	2/1973 4/1973	Drouhard, Jr. et al.	

3,915,012	10/1975	Fletcher 73/421 R	L
4,055,203			

Primary Examiner—William D. Martin, Jr. Attorney, Agent, or Firm—Lee C. Robinson, Jr.

[57] ABSTRACT

Apparatus to receive fecal material directly into a container and maintain it isolated, particularly as to its odors, while automatically homogenizing and withdrawing samples as may be desired and disposing of the remainder. The apparatus, either in fixed or portable form, includes connections to a source of homogenization fluid, a source of cleansing water, and a drain. It also includes means to mix the fecal material vigorously with the homogenization fluid to achieve a substantially homogeneous mixture which can be disposed of with relative ease and which can be sampled into a vacutainer through a vacutainer needle attached liquid-tight to the chamber containing the mixture. For multiple sampling, an automatically operated vacutainer changer brings one vacutainer at a time into position to have a sample of the mixture injected into it. Following such sampling, the apparatus and needle are automatically washed.

5 Claims, 7 Drawing Figures

